Hyperfine Interactions 1990 vol.61 N1-4, pages 1371-1374

Multiple-pulse NMR of oriented radioactive nuclei under electric-quadrupolar interactions

Shakhmuratova L.
Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

The formation of the nuclear spin echo in the Angular Distribution of Nuclear Radiations (ADNR) in the presence of combined magnetic-dipole and electricquadrupole interactions (EQI) is theoretically considered. The case of a perturbative EQI in addition to the dominant magnetic hyperfine interaction is analysed. When both interactions are extremely large, with the EQI much greater than the magnetic inhomogeniety, the excitation of spin-echo in ADNR by pulsed rf field, including transitions between a definite pair of quadrupole shifted Zeeman levels is considered.

http://dx.doi.org/10.1007/BF02407628